

A DIGITALLY CONTROLLED MODULAR POWER SUPPLY FOR AUTOMATED
TEST EQUIPMENT

ABSTRACT OF THE DISCLOSURE

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A digitally controlled hybrid power module is controlled by a programmable controller. The hybrid power module includes a digitally controlled switching supply with an output coupled to an input of a digitally
10 controlled linear voltage regulator. Independent control of switching supply and the linear regulator is provided by the programmable controller, which may be a field programmable gate array (FPGA), microcontroller, or digital signal processor (DSP). The programmable controller may
15 independently control one or more power modules. Each power module may also include enable switching and an associated current clamp for capacitive loads. An output voltage transient suppressor may also be used to control transients, such as those produced under fast switching
20 conditions.